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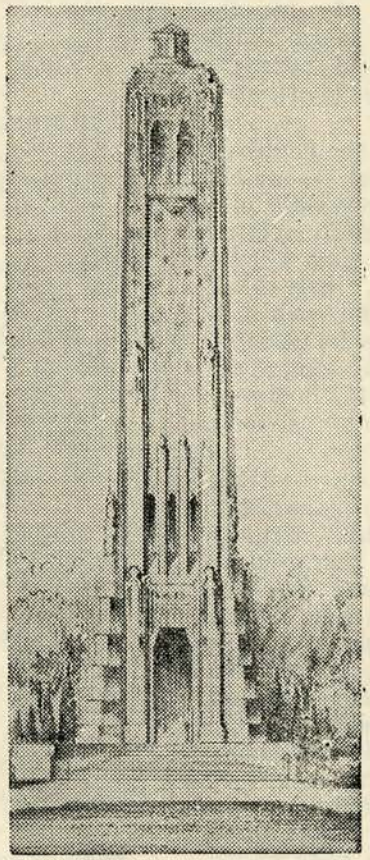

Architect's drawing of the Peace Tower at the International Peace Garden.
Courtesy of The North Dakotan.

The winter meeting of the South Dakota Horticultural Society will be held at Sioux Falls, S. D., November 15 and 16th. Plan now to attend.

LINCOLN'S SPARROW

by

O. A. Sevens

O. A. Stevens

If the ornithologists accept a proposal now before them to eliminate the possessive forms of bird names, I shall be glad to follow their decision. In some cases the names are for someone who had a definite connection with the bird, in others for someone who would otherwise be unknown. In 1833 Audubon had gone to Labrador to look for new birds. On June 27, one of his companions, Thomas Lincoln, brought in specimens of this little sparrow. In describing his painting of it, he states that he put with it three plants characteristic of the country. These were a dwarf dogwood, the cloudberry (Rubus) and a laurel.

Lincoln's sparrow is a bird which the beginner is not likely to learn, but the bander soon becomes acquainted with it, for it comes readily into the traps during migration. It is closely related to the song sparrow but differs in being a little smaller, generally dark, olive-gray, instead of whitish below and brownish above, and with narrow black streaks on the underparts in place of the bold, chocolate-colored spots of the song sparrow. The most characteristic feature, however, is a broad, but often rather faint, band of buffy across the throat.

These birds are abundant with us during their migrations in late April and in September, but they are both inconspicuous and shy. Usually they stay on or near the ground and hurry under cover at the first alarm. In the traps they are very nervous and prone to batter their heads against the wires. Occasionally during the spring I hear one sing, but their usual note is only one of those sparrow chips which is indescribable and yet distinctive when one becomes familiar with it.

It is interesting that while the scientists have delighted to describe some dozen local clans of song sparrows, they have left Lincoln's sparrows together in one big clan except for a single small one along the west coast which has been called Forbush's sparrow. The Lincolns are widely distributed and abundant, nesting throughout the forested parts of Canada and some of the colder northern parts of the United States. E. A. Preble found them more common than song sparrows in northern Alberta, where they arrived the middle of May. In winter they are found from the latitude of southern Oklahoma to northern Central America.

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They do not nest in either North or South Dakota and probably not in northern Minnesota. In the mountains of Montana they are reported to nest at altitudes of 6,000 to 8,000 feet among willows along streams, much as the song sparrows do farther east. The nests are located on the ground and are composed of grasses. The eggs are pale blue with heavy brown markings, about four-fifths of an inch long.

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NEWSLANTS

by
Harry A. Graves

H. A. Graves

Recent articles appearing in The North and South Dakota Horticulture on hardy and ornamental shade trees by C. B. Waldron and George Will have again directed our attention to a few of the rather unusual trees, and I think it is an interesting hobby to locate these trees and watch them at various periods of the year. Only recently I found a tree growing on the south side in Fargo which I believe must easily be the largest Walnut tree in the state. The tree is located in the front lawn of a rather large house and takes up most of the front area. The tree has a magnificent limb spread and a trunk diameter that must be close to twelve inches. The big Honey Locust tree which is located on Third avenue south, and which has been mentioned in an earlier column, is carrying a heavy crop of seed again this year. This tree also has grown to considerable size and its heavy crop of seeds and large pinnately compound leaves cover up the fact that this tree is showing a diseased area where a limb had been removed some time ago. No doubt this tree took a licking in 1935 as did many of our other trees which had appeared perfectly hardy until that time, and perhaps will be hardy for several years to come if they recover from the injury they received that year.

Mr. Will's mention of the Ironwood trees also reminded me of four trees of this species growing as boulevard trees on Fourth street north in Fargo. This tree is also known as the Hop-Hornbeam. We have a specimen of the Horse Chestnut, **Aesculus glabra**, which is really a magnificent specimen. This is the true Ohio Buckeye and differs slightly in foliage from the common Horse Chestnut, which is **Aesculus hippocastanum.** We have one young tree of the latter species growing in Fargo, to my knowledge, and it promises to be a more attractive tree, at least as far as foliage is concerned, than **glabra.**

At least four Catalpas bloomed in Fargo this year, and the tree from which seed was taken in 1937 and distributed to several northern horticulturists has again a good crop of seed set. Both the Catalpa and Honey Locust seed I have found to germinate very readily even after a year's storage at room temperature, and the Honey Locust, in particular, appears to be quite hardy, having made about two feet of growth from seed planted in 1938. Fargo also has three Kentucky Coffee trees, one of which has made considerable growth and is now about twelve feet high. Since these trees are dioecious and the two smaller ones are far removed from the third tree, and also since there is a possibility that they may be all of one sex we perhaps may never secure seed from any of them. This tree is given the scientific name **Gymnocladus diocia** and in its native haunts makes a tree up to 100 feet high. Bailey comments that the seeds of this tree were used for coffee west of the Alleghanies before and during the Revolutionary war. It has long pinnately compound leaves and is a member of the legume family.

The common Mountain Ash, **Sorbus americana,** is quite common in Fargo but not completely hardy. However, the oak leaf Mountain Ash, **Sorbus quercifolia,** is not so common, although we do have a fine specimen of this species growing on North Broadway. The specie name, **hybrida,** has also been given to this tree.

While at the Valley City meeting, Frederick Wolhowe, of Verendrye, commented on finding a tree of Hackberry growing native not far from his home in McHenry County. This is perhaps the northernmost report for this tree, but John Thompson, Extension Forester for North Dakota, tells me that occasional trees are found growing native in the Turtle Mountains.

C. B. Waldron's lone speciment of Rock Elm no doubt can claim the distinction for being the only solitary tree of any one variety growing in the city. Certainly, it is a very attractive tree and appears to be completely hardy, and as a specimen tree is the most beautiful elm that I have ever seen.

Advisory Leaflet No. 297 on sweet corn has been received from the Ministry of Agriculture and Fisheries located in London. The bulletin is recent, carrying the date of March, 1939, and contains many interesting comments on sweet corn. One interesting fact brought out is that in 1850 only ten varieties of sweet corn were known while now the number runs into hundreds. An attempt is made to straighten out the questions in the minds of English people as to the difference between sweet corn and other types of maize grown as feed for live stock. Several American varieties are mentioned in their variety list, as well as the variety Darinny from Canada. A chart has been prepared giving the number of seeds of the different varieties per ounce, also per pound, and gives the rate per acre in the number of seeds to be sown rather than by weight or measure as we do here in America. Instructions on how to determine the proper time to take the ears for roasting is also given and the fact is mentioned that cobs could be pulled from the stalks by a gentle jerk or cut with a knife. Well

(Continued on page 108)

TREES OF THE DAKOTAS

by
Geo. F. Will

Dr. Geo. F. Will

The Balm of Gilead is another native which is regarded as a very handsome tree but has the drawback of suffering badly from canker after it attains a good size. This is true also of the Northwest Poplar. The latter is a relative of the Balm of Gilead but a faster growing and a more handsome tree. It too develops canker badly under drouth or other unsatisfactory weather conditions. The Aspen is also native and is a strikingly beautiful tree but has suffered so badly all through the North from insect damage the past few years that any one hesitates a good deal to try it. In addition it is one of the most difficult of the Poplars to transplant satisfactorily. One of the greatest criticisms of the Cottonwood for town and homestead planting is the amount of cotton which it scatters into the air in June and which is so much disliked by housewives. Fortunately, however, a selection of entirely male trees has been made and trees propagated from this source never have any cotton to drop.

The narrow leaved or Mountain Cottonwood, sometimes called the black Cottonwood, occurs in a few areas of the Bad Lands. It resembles the Balm of Gilead more nearly than the regular Cottonwood and is also susceptible to canker, although under good conditions it makes a very handsome tree. Of the introduced Poplars perhaps the most useful and the handsomest are the Silver-leaved Poplar, which produces a very broad handsome tree whose leaves are silvery on the underside and dark green on the top and whose bark is also somewhat silvery, as well as the Bolleana which is very closely related, very similar in appearance but has a close upright growth like the Lombardy Poplar, which is lacking in hardiness.

Among the extra handsome boulevard trees should be listed the Hackberry, the American Elm and the Linden. These are all native to our state, are all long lived and unusually beautiful and grow fairly fast for permanent trees. The Linden has a beautiful rounded shape. The Hackberry is inclined to approximate in appearance the special types of Elms such as the Moline which have been developed especially for boulevard planting. The American Elm may be found in the usual spray-like form as well as in a number of others including the Valley City Elm, which is a handsome Elm of the closer growing type for boulevard use. The Elm requires a fair amount of moisture, as do also the Hackberry and Linden. They are perhaps, therefore, better adapted for city planting or for planting in coulee bottom and around ponds than for the ordinary prairie windbreak.

Another moisture loving tree which is nevertheless native to our state is the Paper Bark Birch which is found growing naturally in the Killdeer Mountain, the Turtle Mountain and the Pembina Mountain. It is absolutely hardy providing there is plenty of moisture about its roots. Its cousin, the Cut Leaf Birch, which is a form of the European Birch, has proven to be equally hardy but even more exacting as to moisture requirements. The Birch are somewhat difficult to transplant but are certainly ample repayment for the trouble taken when they begin to attain a fair size. There is no more beautiful tree that can be grown in our state.

In the same class of moisture loving trees must of course be placed the Willows. Their principal value in our state is to plant along water courses and around lakes and perhaps for quick shelters or screens in towns. The Golden Willow occasionally winter kills, although if the hardiest strains are used that is not likely to occur. The Laurel Leaved Willow with its green bark and dark glossy leaves is hardier but slower growing. The White English Willow is perhaps the most satisfactory of these three as it is fast growing, perfectly hardy and gets along with a little less moisture than either of the others. A new Willow with red bark in its younger years has come to us from Canada and is said to be fully as hardy as the White Willow and to produce a rather good sized tree in quite a short time. Our largest native willow is the Peach Leaved Willow which is distributed over most of the state. It is rather a handsome tree attaining a height of thirty or forty feet but is short lived owing to the extremely soft character of the wood. It breaks to pieces very easily and the wood from it is of practically no value.

The Diamond Willow is our most valuable willow but hardly classes as a regular tree. The highest height to which I have ever seen it grow is about fifteen feet and normally it is somewhat shorter. It is, however, an exceedingly valuable wood and useful particularly in farm plantings on the better watered soils.

As a purely ornamental tree the Mountain Ash is unusually valuable both for its beautiful Spring burden of white blossom and its great clusters of bright red berries in the fall. It too should be grown only as an ornamental under city conditions with plenty of moisture.

(Continued in October issue)

NATURE DEPARTMENT

by

H. L. Hopkins

Spearing on the Mississippi

In midsummer, 1887, I went out spearing one evening with a friend, on the Mississippi, between Winona and La Crosse. We had a jack light rigged on a row boat. I was at the prow holding the spear. We had fair luck and were pushing against a mild current near shore, in about three or four feet of water. I saw the outlines of what I supposed was a small water-soaked log lying on the bottom. I dropped the spear rather gently on top of it, to help my companion boost along the boat, when Wham! The spear was thrown out of my hand. I recovered it with a stout cord, attached to the upper end. I had unwittingly touched into sudden action a large shovel-nosed sturgeon. I got a decided thrill.

A Battle with a Rattler

I have sent quite a number of rattlesnakes west in my time. From diamond backs in Florida to the prairie varieties on the Montana ranges; but my first encounter was the most thrilling and unforgetable. I was about 10 years of age. My brother Cyril, a couple of years younger, and a boy cousin about my own age, and myself, made up the party. We drove to the north branch of the Root River, in my native county of Olmstead, in southeastern Minnesota, one afternoon in late summer, in quest of fish. After indifferent results for a time, we decided to shift our location and try another "hole" up stream. We were all bare of foot and head and sun browned as nuts. It was necessary to cross a water course used by the overflow of the stream in times of high water, but dry at this time. It was 25 to 30 feet wide and its bed dropped about three feet below the common valley bottom. It was filled with a very rank growth of weeds. We started across it single file, myself in the lead. When about the center of the depression, my cousin, next back of me, gave a frightened yell and ran back with Cyril. They mounted an old stump at the edge of the depression. I had actually stepped right over a rattler. It was stretched at full length and motionless. We were all scared stiff and the boys begged me to keep away, but I just had to kill that snake. I bawled like a baby with fright, but the urge to kill was absolutely compelling. I watched every step I took with eagle eyes and began looking for clubs and rocks for weapons. In the meantime the old rattler began to take notice. He moved slowly and majestically, down the central part of the depression about 25 feet and very deliberately and gracefully wound himself into a compact coil, in a little open space. He carefully selected his battle ground. His vicious head was poised in the center of the coil, with its beady, malignant eyes, gleaming like live coals, ready and watchfully waiting. His old music box was loudly sounding that bony, deadly, hair-raising warning—a sound once heard never forgotten or mistaken for any other by man or beast. I followed his movement at a safe distance but kept in sight of him. I had heard that they were usually in pairs and was in the most deadly fear, all of the time, of encountering others, in that rank vegetation. I, figuratively, had eyes on all sides of my head. After he had coiled I ranger out further looking for weapons. I found a little chunk of sapling about ten inches long and four in diameter. Shortly I found a stout, dry stick of ironwood, about two inches through and eight feet long. Armed with these I edged fearfully back to within about six feet of the big snake. I quickly outlined my plan of battle.

I stood the long club in front with the top resting on my right shoulder and took the short cudget in both hands. I raised it over my head and hurled it with all my strength, at the center of the coil and the upraised head. I made a good shot, striking the center of the coiled mass with the end of the cudgel. Then I grabbed the long stick with both hands and furiously beat the life out of the big fellow. I then balanced it over the end of the stick, carried it to the buckboard and took it triumphantly home, with, I confess, a bit of the "conquering hero" feeling. It was of the "timber" variety, about five feet in length and carried sixteen rattles or buttons.

I was so young and the circumstances were so potentially tragic that every detail was seared and branded indelibly on my memory. We lads had a good-bad day of it, but, as a fishing trip, it was a flop.

LINCOLN'S SPARROW

(Continued from page 98)

The food habits of birds which nest in such remote parts are not well known. Judging from other species, we can be certain that during the nesting season they feed quite largely upon insects. In the fall they eat quantities of small seeds. At the traps they feed freely upon millet. Pigeongrass, ragweed and lambsquarters would no doubt be their main items among weed seeds.

At this point I laid aside the story hoping to add a personal observation of nesting. On July 22, at the edge of a small alpine lake in the Medicine Bow Mountains of Wyoming, I encountered a Lincoln's sparrow which scolded vigorously. She had an insect in her bill and I knew I must be near the nest, but after hunting for a while I gave up the search. Other interests were pressing and there seemed small chance of examining enough of the tangled dwarf willows to find the nest.

PRESIDENT'S CORNER
by
H. E. Beebe

September So Soon

H. E. Beebe

It always seems as if the fall in the Dakotas comes on a bit early. The cool weather of the past two days, down to 42 degrees last night, is a wonderful reminder of the necessity of early protection for any flowers that we wish to protect from some unexpected night frost.

Along the same line, as I have advocated several times, of shielding flowers from the extraordinary changes in temperature and wind velocity, might I say again that flowers grown between stones, especially some that project up high enough to give relief from the forces of the wind, will often blossom for a month later than those in the open.

In my album is a photograph taken November 2nd of nasturtiums against the foundation stones of the bay window. The petunias now blossoming between the stone step of our Terrace and the stone rim of the lily pool will stay for at least two weeks after the petunias in the other gardens in town have frozen off.

Perhaps some of the beauty that we see in other regions is caused as much by the protection the flowers secure from natural obstacles as from the increased rainfall in those localities.

A good-natured friend of mine said that she could not just figure out just what was my intent in the article in the 1937 report.

Secretary Simmons gave me time to explain in an article for this year's annual report but the cares of this life choked off the horticultural impulse. To be very brief, if we would pave half of any area with prairie stones, immediate result would be to double the rainfall as regards the flowers growing on the soil in between the stones.

Last Sunday, Joe Parmley coaxed Paul Cochran and myself to endeavor to find some good looking large stones at Mina Park which would be suitable for monuments for a pioneer settler of Edmunds county, Ezra Drew, and for Ed Cochran, Curator and builder of the Edmunds County Museum who passed away within a year.

Dybvig's trees are thriving wonderfully especially in the terraces along the banks. This is right along the same idea, help nature. Professor Hanson has done wonders in developing varieties that will stand the normal and abnormalities of our climate, and by adding this with the terrace work suggested by Rockwell and perhaps on limited areas as around residences with stone work, I believe we can have flowers for a longer period of time at both ends of the season and more vivid and beautiful blossoms.

Will Gathers Gramma Grass

In the August notes, I mentioned the wonderful crop of gramma grass seed this year and the desire of quite a few County Agents that it be gathered.

George Will writes as follows: "I have your letter of the 22nd. As far as the gramma grass seed is concerned, it is very easily harvested with a combine. We have handled a little of it harvesting in this way the past two or three years. Unfortunately, it seems to be easier to harvest the seed than to find any market for it. We still have on hand the small quantity that we purchased two years ago. Unless a contract could be gotten with the Soil Conservation people, there would be little use in gathering it."

It would seem that it would be logical to promote the seeding of grass that is already native to our Dakota prairies and at the Sioux Falls meeting, it might be best to bring this up and pass suitable resolutions. At the meeting, the question of a state tree might be brought up again as I am still clinging to the old rugged Cottonwood, win or lose, and let the chips fall where they may.

Noteboom writes in his Walworth Treasure recently:

"Technically, this grass is gramma. The experts tell us that it is not buffalo grass at all, the latter being quite different and seldom found east of the Missouri River. To the rest of us it is "buffalo grass" and anyway we do not care about the name so long as it flourishes.

"This grass seems to be in a class with the cactus and wild flowers. Never have the cactus in the west river section been as brilliant with bloom as they were this year. Only in the spring of 1935 have the wild flowers been so plentiful and beautiful. Nature seems to have a way all her own of restoring what she takes away."

Since our last meeting two of our best members have passed on, W. C. Allen of Aberdeen and J. M. Downer of Freeman. Speaking of the hardy cottonwoods reminds one of these two characters who did so much to beautify our state.

Before departing for New York, I had the pleasure of appointing the program committee for the annual meeting at Sioux Falls—George Gurney of Yankton, chairman (he will see that there is plenty of room for discussion this year); our pleasant librarian, Mrs. Briley of Dell Rapids, and our genial and efficient secretary, W. A. Simmons of Sioux Falls. I trust they will call in Mrs. W. J. Tiffany of Aberdeen, who did so much to make the Aberdeen meeting a grand success.

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MANITOBA NEWS LETTER

by

W. R. Leslie

W. R. Leslie

Four Manitobans were priviledged to enjoy the annual meeting of the North Dakota State Horticultural Society at Valley City in late June. Chiefs of horticultural divisions were assembled from Minnesota, South Dakota and North Dakota as well as Dr. N. E. Hansen, Professor Emeritus of South Dakota, and a number of leading nurserymen.

The annual peony show was held at the same time and many beautiful blooms were displayed. Pink shades appeared to predominate.

Mr. H. F. Baker, landscape architect from Minneapolis, gave an unusual address on the value of a home garden. The necessity of a garden in modern day life was likened to that of a radio, a cookstove, and other commodities considered as indispensible. The garden does for the house surroundings what the fireplace does for the living-room. The garden is a place in which to build health, to find a satisfying hobby, a children's playground, a sun-bath room, a setting for bird chores, an estate to which to retire, a scene which expresses the home-maker's soul in natural poetry, an incubator of optimism, and a place to dream dreams that come true.

The prairie states are paying much attention to bird welfare. Lakes are made by dugouts and dams. Hedges and shelters are planted and emphasis is laid on trees and shrubs which bear seeds and fruits attractive to birds as food. Two highly instructive papers were presented on bird life.

The Northwest Nursery was visited. That firm has taken a prominent part in developing an interest in the Scopulorum Juniper or Western Red Juniper. Two select forms are propagated by graftage. Each is silvery. The Grizzly Bear is upstanding and the Minima is lowly with many ascending branches. The nursery exhibited a number of hybrid elms between the Native and the Dwarf Asiatic.

The Dean and the Professor of Horticulture from one of the prominent Colleges of Agriculture in the Prairie States visited the Morden Station this week. They sympathized with the local plantsmen caring for drought-stricken gardens. Among their reassuring comments were those pertaining to the steady growth of general interest in home gardening. Five years of heavy drought find their peoples with a growing zealousness to have well adorned home grounds, productive vegetable gardens, and fruitful orchards and vineyards. As there is a similar tendency apparent on every hand in Manitoba, it may be concluded that prairie horticulture, in spite of a decade of trying weather and dull economic circumstances, is developing substantially in the Great Plains regions.

This season a vegetable garden is being irrigated to secure information as to the benefits of applying water from a dugout. This area will appeal to those who have farm dugouts.

Sand cherries ripened early at the Morden Experimental Station. Of the 14 varieties ripening in late July, the following cooking test notes are given. Opinions were in general agreement among the group composed of three visiting horticulturists from Poland, a visiting nurseryman and three station workers.

The first ten varieties are introductions from the South Dakota Experiment Station.

Oahe, producing a medium crop on an upright vigorous bush, had average to large fruits which cooked to a dark purple red, tender in flesh and skin, smooth in texture, sweet and rich in flavor, with pit rather large. A good culinary variety.

Weta bore a large crop on a sprawling bush. Fruit was small with little pit, dark purple in color, with toughish skin but sweet flavor.

Wewela gave a large crop on a partially upright bush. Fruit was small to medium which cooked to a purple red. Flavor was sweet but carried a trace of pucker.

Keyapaha developed a sprawling bush. The small to medium fruit with large pit cooked smooth and tender with sweet pleasing flavor.

Tepee on an upright bush produced a meagre crop of small fruit. This cooked to a dull color with toughish skin but pleasant flavor.

Wasta had a large crop on a sprawling bush. Size was medium to large, dark in color, skin cooked tough and there was some pucker in taste.

Okreek bore heavily on a sprawling bush. The fruit was small to medium, sweet with toughish skin and somewhat puckerish taste.

Wampum had a large yield of medium large fruits on an upright bush. The canned product was dark purple, toughish and it carried a little pucker.

Watauga was productive on a sprawling bush. Fruit was smallish, dark purple when canned and slightly puckery.

Sioux, the renowned South Dakota mother sand cherry, is of somewhat prostrate habit. The small fruit with small seed canned sweet, smooth and tender.

From this year's test Sioux was surpassed in cooking quality by Oahe and Keyapaha.

SECRETARY'S CORNER

by
W. A. Simmons

Here is a news item that appeared in a recent issue of The Argus-Leader, under an Oshkosh, Wis., date line that greatly interested us: "A row of trees which promises to rival the famous Japanese cherries in Washington will be set out in Memorial Park here next spring. These are Hopa crabs, originated by Dr. N. E. Hansen of South Dakota State College. This variety carries huge bouquets of rosy pink blossoms and in the early fall, the blossoms are succeeded by a crop of apples about the size of cherries. A hundred of the Hopa crab trees are being given to the city by N. A. Rasmussen, who has a fine orchard at his farm near Oshkosh." We hope this item will meet the eye of many park executives.

The summer tour and meeting of the South Dakota Society was participated in by only seven South Dakota members, reinforced by Mr. Graves and Mr. J. Thompson of the North Dakota Society, but as five of those seven were members of the executive board, a business meeting of the board was possible, relieving the secretary of doing too much "dictating." At this meeting it was decided to hold the winter meeting at Sioux Falls, November 15 and 16.

We got only as far as Grand Forks Sunday evening, where we put up at a comfortable cabin camp, where we had another sample of Mr. Dybvig's fine cooking, as we did on many occasions on the trip. At 8 a. m. Monday morning, Mr. Graves and Mr. Thompson joined us and thereafter selected the roads for us to travel. They led us to the home of Mrs. J. Alex. Strong, near Wahalla, where we had a good visit with this much valued friend. A good rain had recently broken a long drought in this northern North Dakota section and gardens were showing their great appreciation of it. We talked Mrs. Strong and her daughter, Mrs. Johnston, into joining us and had the pleasure of their company for the rest of the day. We arrived at Morden at noon and Mr. Leslie had some of his men prepare coffee for us and we ate dinner in the cool shade of a pretty grove on the station grounds. After dinner we were first shown the many different garden and orchard tools used there, most of which had been invented there and made by a very competent blacksmith, and in most cases were a great improvement over those obtainable on the implement market. At Morden we found another South Dakota member, Mr. Marvel Lien of Yankton, representing the House of Gurney, who with his father, from the Fargo Station, had preceded us. Next we were taken out for a tour of the gardens and orchards, or rather the small part of them our "dogs" could stand. The place is so immense that no one can spend but two days there and any more than scratch the surface of the interesting things to be seen there. Established by law in 1914 and first planting done in 1916, it seems incredible that this section of raw prairie could so quickly be transformed into the paradise of the present. About 200 acres are devoted to horticulture and the balance to field crop and live stock experiments. Luck played a big part in their success on obtaining Mr. W. R. Leslie as director in 1921, a most lovable man with one of the keenest minds in horticulture and the driving force of a streamlined locomotive. Under him are about sixty others, each a master in his line and each taking their cue of friendliness and suavity from the directing head. Their ability to raise so many things that are of questionable hardiness, even down here, 500 miles to the south, has long intrigued us, the best opinion seeming to be that it is due to their arrangement of caragana hedges. These have been allowed to grow up to their full height, about 20 feet, run through the fields from east to west, about 90 feet apart and divide the fields into snug little well protected gardens. Mr. Leslie thinks, were he laying out the fields now, in the light of his present knowledge, he would put them 120 feet apart with a row of apple trees down the middle or at the 60-foot mark. Their tomato plants were in rows, six feet apart and four feet apart in the rows and it was worth the trip alone to see the immense and heavily laden plants. In one section, hedges made from most every sort of shrub and tree material, including hackberry, burr oak, boxelder and dozens of others, thoroughly sold us on the narrow top and wide base system of pruning, for all of these hedges were beautiful as well as being "horse high, bull strong and pig tight," which is the specification for a perfect fence. That evening Mr. Leslie had us all over to his house for a banquet, on which Mr. Graves has touched, in his Newslants. Some day some one will write a book about this station, or so we hope, for only in such a medium could an adequate idea of this great project be conveyed. In justice to our other writers, further account of our adventures will have to wait another month.

Organized for 100 per cent efficiency, bee colonies require that each of their members has a real practical justification for existence. Thruout the entire summer season, the great lumbering male bee lives a life of ease and comfort—he is nurtured by workers. With the coming of autumn, when the queen bee has been impregnated, and when new supplies of honey are no longer available, the thrifty commune slaughters every drone in the hive. Between September and the following May, there is no male elemnt in any of the colonies.—Gib Swanson in Capper's Farmer.

THE SUMMER GARDEN

by

W. E. H. Porter

W. E. H. Porter

July 11th. 98 in shade. Delphiniums and Lychni now in full glory, the former a riot of purples and blues, the latter red, crimson, pink and one white. Lychnis fulgens suffering from heat prostration and leaf burn. Open inflorescence of second generation of Delphinium, Rocky Mt. sport in Victoria purples, French and butterfly blues three-four feet tall, have an especial charm of airy grace. The white masses of Geranium pratense var. album, show occasional blue edgings on petals and discovered one flower with four white and one blue petal. July 13th. Oscar Will's new cut leaf dwarf New Zealand delph, in bloom, a dark gentian blue and the only one that has not suffered from days of high wind; it is about a foot high. A bountiful crop of red currants, boughs literally weighed to the ground with fruit. These bushes were planted in 1903, are growing in center of a boxelder grove and have not been cultivated since pre-war days; undoubtedly birds will harvest most of the fruit.

July 17th. A night rain has freshened vegetation and cooled the air. Have four spider lilies in bloom, a blue, white and two pinks, a survival of seven planted last October. Herbaceous soapwort, Saponaria officinalis, double white with faint pink tinge, coming out, fragrance of orange blossoms or is it pineapple? Also large bushes of pink hemp leaved hollyhock, which more resembles a mallow; collected and sowed seeds of blue sport of crimson star columbine. Gentiana purdoni (a native of Tibet) has one long prostrate stem with three flowers at end, long tubular 1 2-3 inch corolla dark blue, white throat.

July 21st. The 98 in shade spell broke with a heavy rain and today, cool N. W. wind prevails, with a mere 67. This induced me to transplant some seedlings, including iris, a premium from Rex Pearce, sown a year ago that came up in May, I forget the name. Chenopodium hybridum showing its dark crimson coxcomb tassels, a volunteer annual that however has to be restricted. Hansen's Shilka iris in bloom; small imperial purple fragrant flowers at top of a long stem; its chief recommendation being large fan shaped foliage, a nice thing. Also lovely bush mallow, Lavatera cashmeriana, loaded with tea cup size flowers, a riot of palest Solferino purple. Russell Lupins are rather a failure with foliage burning brown and shrivelled; a modicum of cool shade, which the prairie offers not, seems to be essential. Small plants of Thlaspi jankae with purplish leaf rosettes showing up everywhere, an evergreen crucifer, apparently biennial here, quite hardy though native of southern Europe, chief recommended very early white flowers in spring. An attractive feature just now is a large dense tansy bush about five feet tall, rich green fernery of foliage topped with a shield of yellow corymbs of disk florets.

July 28th. Coolness continues with pleasant shade temperature of 72. The annual old rose flax now in bloom, seed sown end of April along with one of our showiest annuals Cladanthus arabicus. Rex Pearce's description is complete, "Each plant a mound of ferniness with flowers like bits of gold, through it." Glad to note that Viola Looii (Jewel violet) has good seed maturing, the seed pods protected from burn by heavy leafage, an exception to most of my sun-cured plants where seed vessels have simply dried up. While Delphiniums and Lychni have now passed their prime, the colorful pageant continues. Soapworts like snowdrifts and the lovely flowering onion, Allium montanum, large purple globes overlaid with a silver sheen and at last, have a hardy perennial, midsummer Phlox with Oscar Will's collection of three. Ada Black Jack, pale orchid purple, Boughen Pink and Pyramid White; large flowered clusters of the latter are especially good. My recently divided clumps of Penstemon crandallii from an oversized plant have taken hold readily although many seedlings, transplanted at the same time, have succumbed to heat and drought. However, even smallest Dianthus seedling seems to have survived such martyrdom. The rare sulphus yellow Dianthus Knappi in its second year, now in bloom, truly a grand accent in garden. Its growth is somewhat peculiar, radial circular flower stems topped with numerous flowers, in one case I counted 29 and a hard bare central core. Pearce's new annual Delphinium orientalis is a better edition of well known common larkspur ajacis, dwarfer, bushier plant, flowers darkest imperial purple and hooded.

A word of praise for the medium Delph. cinereum from Asia; a rich French blue, cut leaf and flowers that are unsurpassed, last longer and more sun resistant. Am glad to note many N. D. seedlings from last fall and this spring. The clambering Monkshood Aconitum uncinatum is flowering weeks ahead of time, rather a sombre purple and has peculiar habit of climbing with its flower stems, a rampant climber and tenacious, a really good summer vine for North Dakota, the root being quite hardy.

FRUIT AND VEGETABLE NOTES

by

F. X. Wallner

Apple crop estimate for the states is an increase of six million barrels over last year's crop, or a total of 102,630,000 bushels.

Our first planting of potatoes consisted of Ohios, Cobblers and Triumphs. The Triumphs yielded best, also brought the best prices and looked best, either washed or unwashed. The second planting, consisting all of Triumphs, also have brought the top price and yielded satisfactorily. There were a few rows of Warbas that did better than any since they have come out, several years ago. The third planting, consisting of peck lots and bushel lots bought at the potato show at Brookings, last fall, are being dug now, so that we will have entries at the fair of most all kinds. The Chippewas look the best and yield the best of all the late whites. The Warbas in this planting are disappointing, also a white one. The last planting, all Triumphs, are just in the making, but are thrifty and of good color and will no doubt also be a good crop. On our tour of the Red River Valley, as far north as Morden, there were many fields of good looking potatoes but certain sections were suffering from the drought and some fields were dried up and would yield very little. At the Park River Experiment grounds, we saw tuber unit plots of many types of seed, and it will be very interesting to get the final results of this planting. The average crop for the Valley will be not over 100 bushels per acre, perhaps less.

It is only about 57 years ago that all sorts of talk went about, regarding the tomato or "love apple"; it was really fit only for a table ornament and if eaten it would cause cancer and sure death. About 25 years ago a scare in the papers about a small worm in cabbage that caused everyone to stop eating them and many kraut factories in Wisconsin were bankrupted because no one would eat sauerkraut. Last month we told of Dr. Dafoe receiving bushels of pamphlets telling of the good things about potatoes, rather than the harmful. A few years ago carrots were considered fit only for stock feed, as it put a fine gloss on all horses and cattle. Many people, even today, think parsnips are poisonous and cannot be eaten until spring, that they must be left out to be frozen over winter. Many other vegetables are blamed for this, that and the other thing, but the article on peas in the President's Corner will stop all planting of peas in South Dakota next year. The bold headline, "Dakota Horticulturists should shun peas" will make many gardeners a little peeved and here is hoping that his Mrs. feeds him nothing but onions for a year.

Squashes planted in 8 or 10 places, far apart in different fields, have most all disappeared and before fall I doubt if any good vines will be left but the Table Queen or Acorn, not a true squash We must trace the cause of this wilt or it will be useless to plant squash, as we have not succeeded in growing any for several years.

Last year's peanut crop was worth forty million dollars and for the past 10 years the peanut crop was worth more than all the silver mined. Soy beans were worth 32 millions, grapes 39 millions and turkeys 70 million. Canada will have more than 5,500,000 barrels of apples this year, a big increase over last year's crop. It is some job digging potatoes with such an immense crop of vines going over the chain belt and sometimes it takes extra help to keep the vines from clogging up the whole machine; it would be a load for four horses, but the tractor handles it easily. It is the first time in several years that we have had potatoes yielding well and able to compete with potatoes from any district. The late planting of turnips will all disappear the same as last year, the hoppers take every one and the ground will be bare in a few days.

THE PANSY

by
C. B. Waldron

C. B. Waldron

Not many years ago, the pansy was not considered very important and was grown chiefly because the owner had a personal regard for this flower which has made its appeal to gardeners generally for several hundred years. Within the last twenty years, or so, improvements of this flower have been so great as to make it a valuable feature in any flower garden. The change which has been made is seen in the much larger flowers of better substance and stems up to six or eight inches in length.

There is some difficulty in growing the pansy in this region with its severe winters and hot, dry summers, but if it is handled carefully very good results may be obtained. In the first place, it is a mistake to put pansies in a situation where they get very much shade. To be sure, they will endure some shade better than some other plants, but they grow spindly and have inferior flowers unless they have full light at least during the forenoon, and not too much shade the rest of the time. We have found that moderately rich soil, which is kept moist at all times, will give good results.

The reason the subject of pansies is taken up at this time is because September is a very good time to sow the seed out of doors. As good pansy seed is pretty expensive, it will be necessary to exercise a good deal of care in sowing. The soil must be very fine and the seeds placed two inches apart. The seed should be covered by sifting over fine garden loan that contains a good percentage of humous of some kind. Dried moss or peat is suitable for this purpose. The soil should be pressed down and it is a good plan to keep it covered with a piece of burlap until the plants appear. If the ground is kept moist they will make a pretty good growth during the fall, and if mulched with coarse, dried grass to a depth of a couple of inches they come through the winter in good shape, particularly if they are in a situation where they are covered with snow or along the east side of the house.

In some moderate localities it is customary to carry pansy plants through the winter in cold frames, but we have never been so successful with that as we have with seeding out of doors in the manner that has been described. Fall seeded plants should begin to bloom fairly early in the spring and all through the month of June.

During mid-summer we must not except too much with pansies, but if they are kept watered during that period they will bloom again in the fall up until the time winter actually sets in. No attempt should be made to carry these plants over the second winter as results are never satisfactory. If one has a hotbed, or even a cold frame, the seed can be sown in March and the plants will be large enough to set out by the middle of May and will begin blooming soon thereafter. Plants started in this way will also bloom well during the early part of the summer and again in the fall.

Unless one has a favorable situation for fall seeding, it is perhaps best to depend upon seeding in early spring. It is important, however, to get the plants well along before they are transplanted out of doors, which should never be later than the middle of May.

The pansy is hardy enough to withstand any ordinary spring frost, and in case of severe weather they can, of course, be protected during the night with any kind of cover.

Everyone is familiar with the importance of keeping the pansy constantly picked in order to insure continuous bloom. However, with pansy seed selling at so many dollars for one-fourth of an ounce, one is naturally tempted to save his own seed. A number of years ago a man at Larimore, N. D., started in this pansy seed business and seemed to succeed fairly well for the few years in which he was living there.

The pansy is well suited for growing along the edge of a flower border and shows off particularly well when grown immediately back of Sweet Alyssum.

The children of the neighborhood here always delighted to help pick the surplus panies, which, to our minds, is one of the best reasons we can think of for growing this delightful flower.

BROWNING OF EVERGREENS LIKE SUN-SCALD A FORM OF DAMAGE BY UNUSUAL WINTER WEATHER

By Frank I. Rockwell

Many inquiries have been received at State College and the State Department of Agriculture offices this season concerning the browning of the leaves of the evergreen trees, accompanied by eventual loss of the leaves which grew in 1939 or previous years, and sometimes by the death of twigs or branches, or of the entire tree. The damage the present season is most apparent in Red Cedar and Ponderosa Pine, although similar or other types of damage from the same cause may occur in other evergreens. It is traceable to much the same source as that which causes "sun-scald"

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NEWSLANTS

(Continued from page 99)

written material such as this from distant lands provides very interesting reading and acquaints us with different and perhaps better ways of saying the same thing.

We have recently received one of our regular letters from Mr. A. Griffin, who is stationed at Strathmore, Alberta, with the Canadian Pacific Railway. Mr. Griffin's letters are made up of comments on many things of horticultural interest and often points out sources of unusual plant material that he has discovered in the prairie provinces. Mr. Griffin selected the now quite famous Brooks sandcherry while in charge of the Provincial Horticultural Station at Brooks, Alberta. It was my privilege recently to see a long row of this cherry loaded with ripe fruit, and I must confess that I thought it very good.

People living within driving distance of the Morden Experiment Station are very fortunate indeed to be able to see so many different sorts of plant material growing and fruiting. It was my privilege recently to enjoy the warm hospitality of the Leslies and to partake of cooked samples of many of the things I had seen fruiting in the orchard earlier in the day. Preserved samples of the Rosilda crab, Scout apricot, Mordena plum, Prunus tomentosa, and the Tokata plum were tasted and found delicious. Jellies of Pixwell gooseberry, Tecumseh plum, and Compass cherry were a very convincing demonstration of the excellent qualities of these varieties. Most of us try to take in the plant material at this station in a short day and find it wholly inadequate. Anyone naturally interested in plant material could profitably spend a week visiting these grounds and then perhaps would not cover all the things to be seen.

On a recent visit, Mr. Leslie pointed out a tree of **Populus generosa** which had obtained a height of several feet but was now practically dead. I was much interested in this species since I have several cuttings started and had hoped to use them as specimen trees where rapid growth was desired. Apparently they are very subject to a severe canker and will never be very successful with us here.

PRESIDENT' CORNER

(Continued from page 102)

Secretary Simmons promises us some good looking programs in good season to advertise the meeting, similar to those gotten out by the North Dakota Society for the Valley City meeting in June. Our North Dakota friends have the same problems as ourselves and we hope there will be a good attendance from North Dakota at the Sioux Falls meeting.

In Slope County, in July, I had the pleasure of seeing some beautiful Columnar Cedars known to the nurserymen as Scopulorum Junipers, northwest of Amidon near the burning coal mine. The guide, Harry Roberts, genial manager of the Amidon hotel, said these were the only evergreens in North Dakota. George Will maintains there are some Columnar Cedars near Medora. Are there any other pines or cedars in the whole state of North Dakota?

I would recommend to anyone getting into the northwestern or the southwestern part of North Dakota to drive up to Amidon and see these beautiful cedars and the burning coal mine in the same canyon.

BROWNING OF EVERGREENS

(Continued from page 107)

in deciduous trees. It is not, in my opinion, the result of insect or disease depredations, but rather to be expected because of the unusual weather conditions of early 1939.

The first half of February, a period of blizzards and intense cold, was followed by several days of exceptionally warm weather during which the temperatures went as high as 70 and 80 degrees in some of the southern countries. Such temperatures stimulate cell activity in the evergreen leaves of conifers and are apt to start sap flow in deciduous trees, particularly on the southerly side of the tree, if not shaded. Considerable water may be transpired by the green leaves, or expelled by the cells of the inner bark from twigs and unshaded tree trunk, which cannot be replaced through the frozen roots of the tree. The result is a break in the sap stream and the death of the part affected, although the damage may not show up until the growing season arrives.

Sunscald in fruit trees and other deciduous trees is largely due to the similar conditions of weather. Shading of newly planted evergreens the first year or two by shingles or burlap to the south and west will prevent or reduce this form of winter injury, and protect the tree from burning by summer sun and hot winds.

Due to variations in the resistance of individual trees, some trees are damaged very little.

Rapid growth of trees continued into the late fall may cause severe injury to all types of trees from the freezing of the sappy, unripened wood. This possibility is reduced by discontinuing cultivation about August 15, or by not watering from that time until late October, just before freeze-up.